

C L A I M S

1. A device for antibacterially treating, in particular decontaminating and/or sterilizing water and for killing microorganisms in water, which device is developed to work together with a container (10) designed for holding a quantity of water (20) intended for treatment, and has an electrode arrangement (24) set up for pulsing the quantity of water in the container, said electrode arrangement being connectable to and operable with an electrical signal-generating device, characterized in that the device has a discoid housing (16), which is preferably provided in the container in detachable or removable form, and has the electrode arrangement (24) on at least one flat outer side (22) of the housing, and the electrical signal-generating device in the interior of the housing.
2. Device according to Claim 1, characterized in that the container is developed as a tumbler- or pot-shaped fluid vessel (10) and the housing (16) is provided in the base of the fluid vessel in such a way that the flat outer side (22) forms an effective floor for the water.
3. Device according to Claim 1, characterized in that a holder (30) for detachable fixing of the housing (16) in the container is assigned to the housing, and is developed such that when the container is filled the two opposite flat outer sides (22, 40) of the housing are in contact with the water mass.
4. Device according to Claim 3, characterized in that the holder (30) is rod-shaped and is developed to route supply voltage and/or control signals from an

external unit to the electrical signal-generating device, protecting them against the water.

5. Device according to Claim 3 or 4, characterized in that the holder (30) is developed to be adjustable in height for a change to an immersion position of the housing in the water.
6. Device according to one of Claims 1 to 5, characterized in that the electrode arrangement (24) has a material that is selected from the group consisting of a stainless steel alloy or iron-silicon alloy, magnesium-zinc-calcium alloy, gold, silver, palladium, platinum, titanium, carbon, graphite, a semiconductor material and a conductive synthetic or glass material, and preferably has platinum, an electrode width or thickness of the further preferred strip-form electrode arrangement being between 0.2 mm and 5 mm.
7. Device according to Claim 6, characterized in that the electrode arrangement is in elongated linear, circular or spiral form, flat or vertical or formed from one or a plurality of pins.
8. Device according to Claim 6 or 7, characterized in that the electrode arrangement is formed on one flat side of a disc element with plastic, Teflon, glass, aluminum oxide or ceramic, particularly a ceramic coating, the opposite flat side to the one side preferably being developed for fixing electronic components of the electrical signal-generating device.
9. Device according to one of the Claims 1 to 8, characterized in that the electrical signal-generating device is developed to be operable with low voltage and to generate an electrical alternating

signal between electrodes of the electrode arrangement with a maximum amplitude $< 50V$ and a signal frequency in the range between 1 and 500 kHz, in particular 5 to 50 kHz, the signal-generating device having settings means developed for automatic changing of a maximum amplitude, an amplitude swing and/or a signal/pause ratio of the alternating signal, dependent on a conductivity of the water mass, and means preferably being provided for short-circuiting the electrodes during a pause in the electrical alternating signal.

10. Device according to one of the Claims 1 to 9, characterized in that the electrode arrangement additionally has a dechlorination electrode causing a dechlorination of the water mass and/or an ion enrichment electrode for Mg, Zn, Ca or Ag, or the electrode arrangement is developed as a dechlorination electrode.
11. Device according to Claim 10, characterized in that the dechlorination electrode has an alloy with Mg, Zn or Ca, or an alloy with Fe, Zn, Fe-Cr-Ni.
12. Device according to Claim 10 or 11, characterized in that means for triggering the dechlorination electrode as anode as a unit of the electrical signal-generating device for generating a voltage between 2V and 24V, in particular 12V, and a current between 5 and 100mA, in particular 20 mA, are provided and developed in the housing in such a way that they preferably, at regular intervals before or after a signal application to the electrode arrangement by the signal-generating device, or independently of this, perform a dechlorination operation on the water in the container.

13. Device according to one of Claims 1 to 12, characterized in that the discoid housing (16) has a circular or rectangular form in relation to the flat outer side with a diameter in the range between 35 mm and 150 mm, in particular 70 mm to 100 mm with the electrode arrangement provided on only one flat outer side and 40 mm to 60 mm with the electrode arrangement provided on both flat outer sides.
14. Device according to one of Claims 1 to 13, characterized by a mechanically operative filter unit pre-connected to a container inlet of the container and/or assigned to a container outlet of the container.
15. Device according to Claim 14, characterized in that the filter unit is developed as a one-way filter, has a defined matrix of a porous material, in particular fleece or cellular material, and on the matrix absorption means, in particular activated carbon or zeolite, and/or an ion exchanger means, tartaric or citric acid, are applied.
16. Device according to one of Claims 1 to 15, characterized in that heating and/or cooling means are assigned to the container for selective changing of a water temperature of the water mass.
17. Device according to one of Claims 1 to 16, characterized in that the discoid housing is developed for use in or with a cistern for drinking water, a tank for household water or a plant with a water container for industrial use.